LONG ISLAND SINCLAIR TIMEX GROUP

L.I.S.T.ING

OCT. 1986

MEETING NOTES FOR SEPTEMBER 14, 1986

The meeting was lightly attended and was called to order at about 2:25PM. There were no demonstrations given so the meeting was primarily an organizational one.

OLD BUSINESS

Unfortunately, there have been no responses from people who would consider editing the newsletter. Consequently, much of the discussion centered on this topic. Paul D. has done a magnificent job in organizing the Group and editing the newsletter but now other more important commitments like family, business, etc. have prioity. However, Paul is still interested and he'll still be active in L.I.S.T.

We are putting out this OCTOBER issue with a small committee approach. A group of 5 or 6 individuals will meet about 2 weeks prior to the publishing date to edit and cut-and-paste the issue together. We will strive to keep the issues interesting and informative within a 12 page format. Hopefully, if this approach is successful, someone will step forward as editor and leave the cut-and-paste and publishing to a small group which can expand or contract as required.

The second topic which generated much discussion was that of the library tapes.

This has been a legimate concern with many of the members which we are addressing. The loop idea is a good one: economical and efficient. However, the success of the loop depends on each member copying the tape and passing it on swiftly. Unfortunately, the process is uncontrolled and we get many complaints from members who have not received the tape at all. We are trying out a new "direct mail" method of managing the tape library.

Harvey R. has agreed to become the Tape Librarian. New tape issues will be produced with selected new material and will be available to members.

Members desiring a copy may order it individually under a 2 tier fee structure.
A "one way" request will have a set fee to cover the cost of the tape material and postage and handling. A "two way" request will include a tape (hopefully with a donated program on it) and will have a reduced fee to cover only P&H.

The older issues will be streamlined to avoid duplication of programs and will be available to all members.

NEXT MEETING

The next LIST meeting is scheduled for Oct. 19 at 2:00 p.m. in the Huntington Library.

IMPORTANT NOTICE : PLEASE RESPOND IMMEDIATELY , IF INTERESTED

In the Sept. 14 meeting a discussion of the special QL offer by the A+ Computers also took place. The relevant documents are reproduced on P.11. There is interest in purchasing the QL kit, which in quantity will cost our group $109.00 plus probably $10.00 S&H. To become eligible for quantity discount the group decided to pool resources with the N.Y. group, as well with CATS. In order to make all the orders centrally administered, we asked Doug Dewey (Triangle UG) to coordinate the effort. If you are intertested in the deal please inform Mr. Dewey at the following address immediately:

Mr. Douglas Dewey
206 James St.
Carboro, North Carolina 27510

Do not send your check yet. Only inform Doug of your firm committment, so that he can negotiate on our behalf.

SOLUTION TO THE PUZZLE IN THE LAST ISSUE:
The computer was the the Portugese TC2048. It is a glorified Spectrum and doesnot have a 2068 mode. Did you notice that Timex/Sinclair had finall discovered LED's. Amazing. Isn't it??????

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VENDOR REPORT

Algis E. Gedris, 355 Royal Oak Blvd., Richmond Heights, Ohio 44143 (216-481-8205) has anounced a "CLONE" program for backups of ALL 2068 and Spectrum tapes. The prog. also incorporates a header reader. The price is $7.00+$1.50S&H.

Electret Scientific Co., P.O. Box 4132, Star City, WV 26505 has anounced "MUSICIAN ROYAL", a TS2068 music software for $20.00 PP. Various play, save, and edit options are provided. 1500 notes per composition capacity is provided. The program uses the BEEP.

NOVELSOFT, 106 Seventh St., Toronto, Canada M8V 3B4 has anounced "TIMACHINE", a BASIC compiler for $19.95+$3.00 S&H. Both the Spectrum and the TS2068 versions are supplied on the same tape. NOVELSOFT has also anounced a graphics program "ARTWORX" with pull-down menus, spray, zoom etc. etc capabilities.

CENTRONICS, 1 Wall St., Hudson, NH 03051 (Dave Biron 603-883-0111 Ext. 5286) has send a brochure to the group detailing more than 40 of their printers, at very low prices. As an example model 730-1 dot matrix, 100 CPS, parallel version (730-3 is the serial version), List priced $595.00 is being offered new for $75.00, used and tested for $65.00. More importantly the OMNI READER (LIST$795.00) is offered for $75.00. The OMNI READER (a device for reading and inputting typed pages of information to your computer) is presently advertised in PC, BYTE and other magazines for $179.00.

BEST BUYS

In my local RADIO SHACK store the 16K memory expansions for the MC10 computer were for sale for $1.00 each. Assuming that you don't use the chips, the box (the size of the ZX81 mem. exp) in which the memory exp. comes in is a steal for that price. You can use it for any small projects.

LOLIR LECTRONICS, 13933 NO. CENTRAL #212, DALLAS, TX 75243 (214-234-8032) is offering a TTL RGB monitor (without a frame) for $29.95. They also have a monochrome monitor with the frame for $19.95. The units are new.

COMPUTER AUCTION (800-972-2700) is offering an "IBM Compatible" full size serial thermal printer for $30.00.

STREAMS & CHANNELS

by John Pazmino

A stream is a dataflow in/out the program. Its home terminal is the program; its remote terminal is deliberately assigned to a channel.

A channel is a ML program accessed by the BASIC program via streams. IT IS NOT AN EXTERNAL APPARATUS, like a modem or robot!! The ML program could govern an outside device but it plain doesn't have to.

A stream can terminate in only one channel at a time; a channel may be the terminus of many streams.

A stream is a two-way "road" connecting the BASIC and ML programs and can handle traffic into or out of the BASIC program. Data is sent out of the program with (typically) the PRINT#n. n is the number of the stream. Input to the program is fielded (typically) by INPUT#n.

The TS instrument has 19 streams and indefinitely many channels. Streams are numbered -3 to 16. #-3 to #-1 are phantom streams reserved for TS internal use.

Channels are designated by a character, usually a letter.

The TS preassigns streams #0 to #3 to channels "K", "S", and "P" in hoc schema:

#0 & #1	"K", keyboard & lower screen
#2	"S", upper screen
#3	"P", TS printer

The printer is specifically the TS proprietary unit (or workalike), like the Alphacon 32, Floyd 40, or TS 2040. IT IS NOT A GENERIC PRINTER AT ALL.

The TS preallocates stream #2 to PRINT, LIST; #3 to LPRINT, LLIST; #0/1 to INPUT, INKEY$. You don't have to specify these streams. To redirect flow you give the stream. PRINT#3 sends output to the printer. Some combinations don't work. INPUT#2 looks for data coming from the television screen. 'Cuz there isn't any, an error is triggered.

These stream-channel assignments are cemented; you can't change them. You cannot, for instance assign stream #0 to channel "P"; it just won't take.

NOTATE MAGIS BENE!: These channels ARE NOT APPARATUS ATTACHED TO THE COMPUTER. They are ML codes (in the ROM). That these codes operate the TV, etc., is immaterial. The streams are assigned to ML programs.

You can use the remaining streams, #4 thru #15, to control your own machine language programs. To do so, you must do some simple poking into the STRMS zone of RAM and write a channel record in RAM.

First write (or load) the ML program; note the entry addresses for the program's input and output. If one is absent there better be an entry for error trapping, or you'll use the ROM error routine.

Write a five-byte record for this ML program. It's best to tack it in front or back of the program, but note its start address. The first two bytes are the lo-hi address of the output entry point. The 2nd two are the lo-hi address of the input entry point. Where one is absent, put in the entry address of the error routine. The 5th is the code of the character designation for this channel. It can not be "K", "P", "R", or "S" 'cuz these already are given to the onboard channels. ("R" is RAMspace and is assigned to phantom stream #-1.) Use a letter rather than a number, symbol, or token.

Pick a vacant stream number. Then calculate
(stream address)=(23574) + (2) * (stream number), and
(channel offset)=(channel address) - (26687)

Do POKE (stream address), (channel offset)$_{lo}$ and POKE (stream address+1), (channel offset)$_{hi}$.

Now the new stream is created and opened to the new channel. To operate your ML program, use INPUT#n, PRINT#n, etc., n being the number for the new stream. To close the stream, poke zeros into that stream's address & address+1.

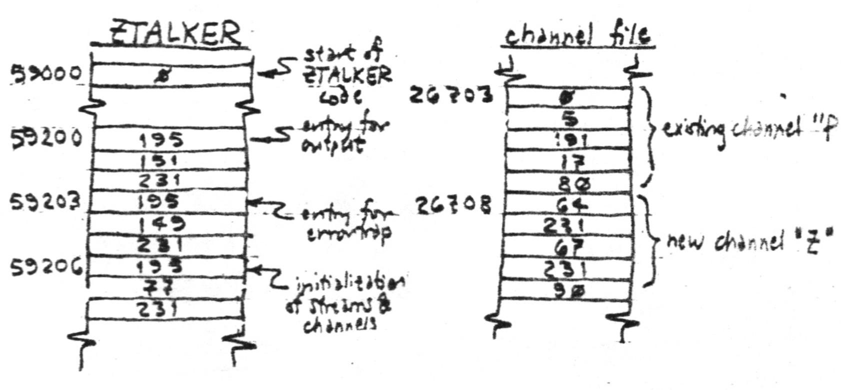
In operation, INPUT#n goes to the STRMS region, looks up stream #n, picks up the channel offset, regenerates the channel address, goes to the channel record, picks up the input address, goes to the input address, processes the ML code starting at this point, returns to the BASIC program.

Understand most well that the BASIC program regards INPUT#n , LIST#n, etc as orthodox INPUT, LIST etc with no fettering to a this or that stream. Hence PRINT#n, say, will be structured just like a primitive PRINT, with attributes, control chars, punctuations, the one and all. Your ML program must deal with this stream of bytes - even if it just passes them up. Likewise, INPUT#n will be received by the BASIC exactly as if the chars were keystruck by a vivid body, with keywords, capslock, graphiclock, el todo y uno. Your BASIC program must cope with this char stream in whatsoever appropriate manner.

Just as the ML program itself must be protected against corruption during machine operation, as by its placement above RAMTOP, so, too, must be defended the very channel records.

Lo here an example, the Zebratalker voicebox. The driving program, ZTALKER, is stored from 59000 on up. The entry for the output section is at 59200; error section, 59203. There's no "input" from the voicebox, the code starting at 59203 traps attempts to do INPUT on the Zebratalker. The zone starting at 59206 does the various figuring and pokes to establish the new stream and channel when you do RANDOMISE USR 59206. The channel is designated "Z" (God only knows why) and the stream is #4.

ZTALKER puts the new channel record above the existing ones, which is fine - if you're careful. It is all the way best to put your own channel records in a free area of protected RAM. Regardez-vous en suite:

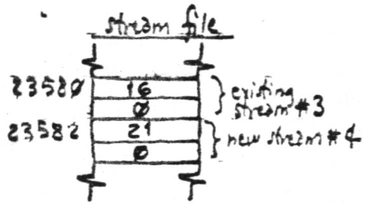


ZTALKER, when entered by the BASIC program's output (that is, a PRINT#4 statement) does a JP 59288 to some interior region of itself to actually convert the text of PRINT#4

into speech. If an attempt by BASIC to receive input is made, as by an INKEY$#4, ZTALKER does a JP 59285 to intercept the attempt.

The channel record is installed, by the code at 59206 on up, at 23708. The first two bytes are 64; 231, the lo-hi equivalent of address 59200. The next two are 67; 231, for 59203. The last byte is 90, the charcode for "Z". You can assign any code to designate the channel, but don't use "K", "P", "R", or "S", since these are already assigned to the built-in channels.

Now go to the address for stream #4, which is 23574 + 2 * 4, or 23582. The channel offset is 26708 - 26687, or 21 Poke 21 into addresses 23582 -23583. The lo byte is 21; hi, 0.



And, miraculo miraculorum, stream #4 is opened for channel "Z". That may be, you can do [PRINT#4;a$] in BASIC and a$ will be placed into ZTALKER and be turned into (passable) speech. You just operated an ML program directly from BASIC.

To consider an other example, look at stream #3 and channel "P". These are two of the cemented stream-channel links in the TS. The offset read out from the stream file is 16 + 256 * 0, or 16. 16 + 26687 is 26703, the start of the channel record. The output address is 0 + 256 * 5, or 1280; input address is 191 + 256 * 17, or 4543. The designation is 80, for "P".

Recourse to your ROM atlas. Address 1280 is the entry to the omnibus print-out routine - channel "P" is the "printer" channel. Address 4543 is not a regular input but an errortrap. It triggers a "J - invalid I/O device" message. You can not get input from the TS printer.

(This manuscript received in long-hand 6-22-1986, MScripted by Cedric R. Bastiaans, without any additions, corrections omissions or editing)

HINTS and TIPS

When program listings are printed here, they are shown as they will appear on the SPECTRUM when LISTED. As usual our thanks to all members who have sent hints & tips for publication in Softly, and again we don't have room to publish more than a few. Ian Crocker sent these tips for playing RAMBO.

THE START: Just use the knife and only if you have to. Any other weapon attracts too much attention. Do not progress until you have found the launcher, pick up other weapons for high scores.

THE ASSAULT: Blow up the bridge leading to the POW camp with the rocket arrow or a grenade. Enter the camp and switch back to the knife. Find Commander Banks and cut him free (this happens automatically when you get close enough).

THE ESCAPE: Straight away switch to grenades as these are the best for close fighting. Make your way NORTH-EAST until you see a fence going upwards on your left. Follow it NORTHWARDS until it ends, go round it, turn LEFT, carry on going WEST until you hit another fence. Follow this fence SOUTH, round it and turn NORTH, follow the fence upwards, turn NORTH-EAST until you come to another fence which is shorter than the rest of them, follow it NORTH until it ends, turn NORTH-EAST and you will come to a helicopter.

THE HELICOPTER: Climb into the helicopter and once you are airborne switch to the rocket launcher and blast everything in sight. Some of the buildings can be shot twice for extra points. You can land at any pad marked with the letter H.

THE PRISONERS: Fly SOUTH down the left hand side of the screen and land on the pad inside the compound. Using grenades, go EAST until you come to a bamboo hut. Now switch to the knife and cut the prisoners free. Now back to the helicopter and fly NORTH-EAST and avoid the SUPER CHOPPER on it's suicide mission. Land on the pad and enter the hanger to complete your mission.

KNIGHTLORE & UNDERWURLDE

The Knightlore & Underwurlde programs are very similar. ONLY TWO DIFFERENT POKES may be entered for each LOAD.

KINGHTLORE

```
 10 CLEAR 24831: RESTORE: GOSUB
60: GOSUB60: POKE 62000,61: POKE
62176,0: POKE 62258,201: POKE 62
410,251: POKE 62411,201: RANDOMI
ZE USR 62374
 20 REM  enter POKEs in this line
 30 PRINT USR 24832
 40DATA 23296,23309,221,33,84,
156,17,14,4,62,255,55,205,86,5,2
01
 50 DATA 41012,41021,33,113,158
,17,[illegible],242,1,172,1,175
 60 READ A,Z: FOR A TO Z: READ
D: POKE P,D: NEXT P: RANDOMIZE US
R A: RETURN
```

==============================

```
POKE 50084,201     Stop Metamorphosis
POKE 53567,0       Infinite Lives
POKE 50206,0       Infinite days
POKE 49759,n       n = No of objects to collect
```

==============================

UNDERWURLDE

Same as above except change:-

LINE 50 : 41012 to 41008, 41021 to 41017

LINE 30 : Change to PRINT USR 26610

```
POKE 59376,0       Infinite lives
POKE 45106,201     Removes sprites
```

For both UNDERWURLDE & KNIGHLORE, play tape just past the initial program, then play.

NIGHTSHADE

For infinite lives, type this routine in, SAVE it to a spare blank tape, then to play NIGHTSHADE load & run this program first, then play the NIGHTSHADE tape.

```
 10 BORDER 0: PAPER 0: INK 0:
CLS
 20 PRINT AT 9,1; INK 7;"PLAY
IN  NIGHTSHADE MASTER TAPE";
AT 11,9;"FROM THE START"
 30 FOR N = 1 TO 5: PRINT AT 1
9,0: LOAD """" CODE: NEXT N
 60 POKE 52660,240
 70 POKE 52661,224
 80 POKE 52700,176
 90 POKE 52701,176
 100 POKE 52730,160
 110 POKE 52731,240
 120 POKE 52732,7
 130 POKE 52733,4
 140 PRINT USR 23424
```

FULL THROTTLE

These pokes prevent you from slowing down plus they allow you to pass through the other riders.

```
 5 REM FULL THROTTLE POKES
 10 CLEAR 65535: FOR A=23296
TO 23311: READ B: POKE A,B:
NEXT A
 20 RANDOMIZE USR 23296: LET A
=60232
 30 READ B: POKE A,B: LET A=A+
1: IF B<>233 THEN GOTO 30
 40 RANDOMIZE USR 60018
 50 DATA 221,33,85,234,17
 60 DATA 160,1,62,255,55
 70 DATA 205,86,5,48,241
 80 DATA 201,175,50,106,176
 90 DATA 62,201,50,43,189
 100 DATA 233
```

PYJAMARAMA

To get the crash helmet, collect the driving licence and jump out of the window. Then you can collect the ignition keys. Make your way to the crash helmet and slide down the banister above it. You may now use the crash helmet (with the library book) to collect the scissors.

JET SET WILLY 11

This program will gain you infinite lives. SAVE it to a BLANK tape (NOT the game tape) with GOTO 100.

```
 5 REM JSW 11 POKES
 10 CLEAR 63999
 20 FOR F=64000 TO 64053
 30 READ A: POKE F,A
 40 NEXT F
 45 PRINT FLASH 1; "PLAY JSW
11 TAPE FROM START"
 50 RANDOMIZE USR 64000
 60 DATA 49,200,250,221,33,0,0
,17,136,0,62,255,55,205,86,5,48
,238
 70 DATA 221,33,0,64,17,56,185
,62,255,55,205,86,5
 80 DATA 33,46,250,17,197,100,
1,8,0,237,176
 90 DATA 243,195,0,95,62,195,5
0,22,122,195,0,112
 100 SAVE "LOADER" LINE 10
```

PYRAMID

Still one of our favourite games, it is made much easier by these POKES.

```
 1 REM PYRAMID POKES: PRINT AT
 0,7; "START PYRAMID TAPE"
 2 MERGE ""
 5 GOTO 10
 282 INPUT "START ENERGY (0-999
)"; LINE E$
 284 IF LEN E$ = 0 OR LEN E$>3
THEN GOTO 282
 285 FOR N=1 TO LEN E$
 286 IF E$(N) >="0" AND E$(N)<=
"9" THEN POKE 37310-N*3,VAL E$(
N)
 288 NEXT N
```

COMMANDO

Here are the POKEs for inifinite lives. LOAD this program, RUN it, playing COMMANDO tape when asked.

```
 10 CLEAR 40000
 15 PRINT AT 10,0 "START COMMANDO TAPE"
 20 LOAD "" CODE
 30 POKE 65267,203
 40 POKE 65379,68
 50 POKE 65380,15
 60 POKE 65382,108
 70 POKE 65383,165
 80 FOR N = 65482 TO 65497: RE
AD A: POKE N,A: NEXT N
 90 RANDOMIZE USR 65263
 100 DATA 175,50,122,104,50
 110 DATA 4,108,50,5,108
 120 DATA 50,6,108,195,30
 130 DATA 100
```

NODES OF YESOD

Program for infinite lives. Just RUN this program, then START the NODES OF YESOD tape. (Top of next column)

```
 10 LET S=30000: LET N=21: GOS
UB 20: RANDOMIZE USR 30000
 15 LET S=63218: LET N=7: GOSU
B 20: RANDOMIZE USR 63201
 20 FOR X=S TO S+N-1: READ Y:
POKE X,Y: NEXT X: RETURN
 30 DATA 17,17,0,175,205,60,11
7,17,250,2,62,255,221,33
 40 DATA 188,244,55,205,86,5,2
01,175,50,149,127,195,0,226
```

A BASIC shape designer from Owen Connor. It does occassionally crash during the drawing routine, but can easily be restarted with a RUN command.

Try experimenting with using whole numbers for the variables 'e' and 'k' in line 20 - or you could even work out an INPUT routine. Then add some colour. The shapes created are really very good.

```
 15 PLOT 128,168
 20 LET X=128: LET H=0: LET K=R
ND*100: LET E=RND*2-RND: LET Y=8
8: LET S=80: LET A=0
 35 DRAW X+SIN A*S-PEEK 23677,Y
+COS A*S-PEEK 23678
 40 LET S=S-E: LET A=A+K
 60 IF S>0 THEN GOTO 35: PAUSE
 100
 70 RUN
```

PINBALL WIZARD

POKE 48182,0 (INFINITE BALLS)

POKE 49054,0 (BONUS RESETS at 10,000)

POKE 45560,b-1 (b=no of balls (max 15)

```
 5 CLEAR 60000: LOAD """" CODE
 10 REM Put pokes here
 20 FOR P=50000 TO 50011
 25 READ Q: POKE P,Q: NEXT P
 35 DATA 1,0,63,17,0,64,33,232
,128,237,176,201
 40 PRINT USR 50000
```

WORSE THINGS HAPPEN AT SEA

Type the program below, SAVE IT TO BLANK TAPE, then LOAD & RUN it. Play the WTHAS tape.

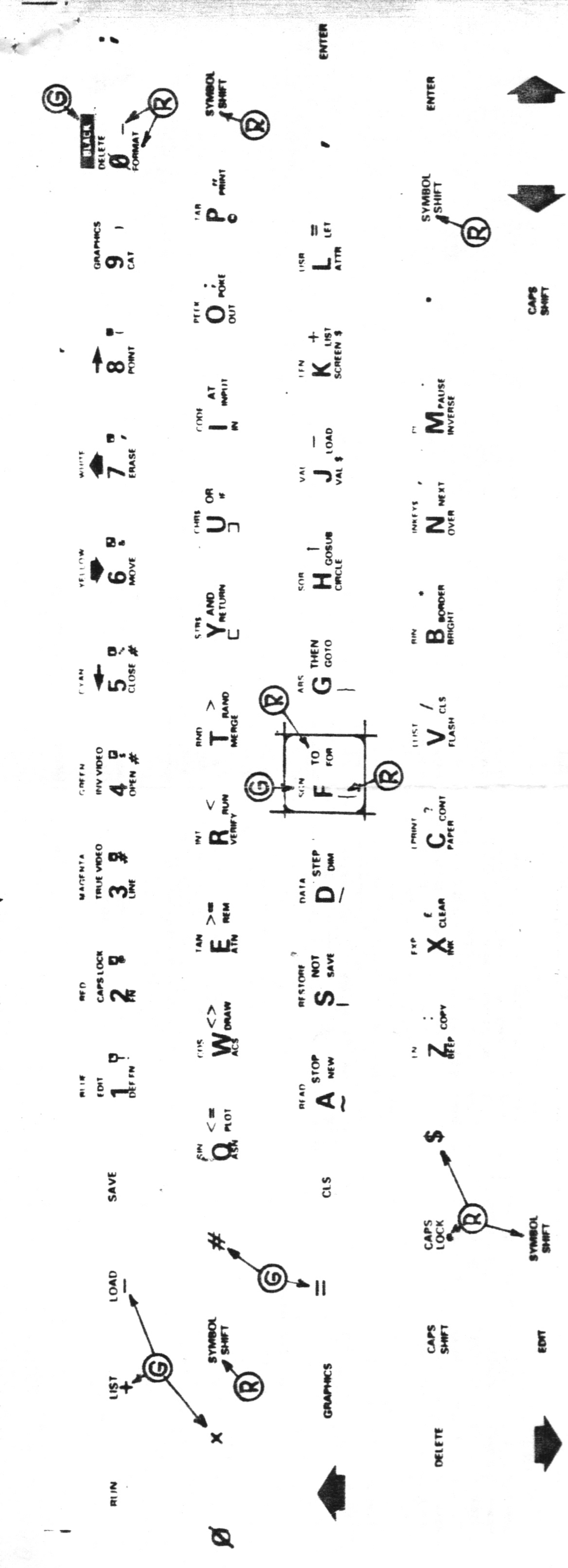
```
 1 CLEAR 25383: LOAD "WTHAS"
CODE 25384
 2 FOR F=23296 TO 23307: READ
A: POKE F,A: NEXT F
 3 RANDOMIZE USR 23296
 4 CLEAR 29999: NEW
 5 DATA 17,48,117,1,194,101,
33,88,152,237,176,201
```

After LOADing, the computer will NEW, but all is not lost. Type the following as direct commands.

POKE 35443,0 (For infinite c-droids)

POKE 35303,0: POKE 33221,0 (For infinite energy)

Then, to start game, type RANDOMIZE USR 31000, and all will be revealed....



MORE KEYBOARD MANIA

In Part 5 of KEYBOARD MANIA (June '86 issue), I wrote in paragraph XI. THE KEYTOPS, that there is no source for ready-made keytops for the TS2068, like there was for the TS1000/ZX81 (by Mule Electronics of LA).

Well, this is not entirely true. A LIST-member wrote that adhesive-backed vinyl keytops can be obtained for the SPECTRUM, for £2 (two pound sterling), from:

SAGA Systems Ltd.
2 Eve Road
Woking, Surrey
ENGLAND. GU214JT

These keytops are not as thick as the Mule ones and they are TRANSPARENT. This means that you will have to PAINT the top surfaces of the keys, preferably WHITE in order for the legends to clearly show up!

The SAGA keytops come in a sheet, which I have copied for you on the left. It is in three colors, black, red and green. The latter two colors are so indicated on the copy. Everything else is black.
The keytops are of standard size and the outlines are cut through the vinyl onto the paper backing, so that you don't need to do any cutting.
I have outlined keytop "F" to show you its size.

I would not be totally happy with these keytops; my first objection would be that the legends are ridiculously SMALL! They could easily have been made larger and hence better readable. There certainly is plenty of room available within the outline...

The second disadvantage is maybe a minor one; the keytops are for the SPECCY and there are consequently some TS2068 legends missing.
Keytop "A", for instance has a TILDE instead of FREE. Keytop "S" has a vertical line rather than STICK. And there are more (F, G, and P).

My third objection is, that the printed legends are ON TOP; I have no idea how scuff-resistant they would be. It seems that a transparent lacquer coat would be advantageous.

Finally, I don't know how good the adhesive on the back is. I myself have in my experiments with keytops, used certain labels (not the printer kind), which after a while started to MOVE AROUND, a very undesirable situation.

Decide for yourself if these keytops are for you!

Cedric R. Bastiaans

PORTUGESE DISK START PROGRAM WITH AUTO LOAD BAR

As per my prior program, this START program has similar features to the original. The disk is CATalogued and a red bar appears in the center of the list. By pressing the 6 or 7 key the bar is moved through the program lists.

When the bar is placed over the program name, the ENTER key is pressed and the program or file is loaded. Lines 52 and 54 prevent the bar from "reading" a false line and keep the bar within the program limits.

Although the loading time is slightly increased with this START program, readers may prefer this version because it reads and addresses more program lines ...and its sort of fun to do!

George Gilder 06/86

```
   2 LET G=VAL "5": LET K=PI/PI:
 LET L=K+K: LET J=K-K: LET S=VAL
 "14": LET M=S/L: DIM Y$(S): LET
 T=VAL "10": LET V=T+T+J: LET D=
S-K: LET Y=VAL "48": LET Z=Y+K+K
: POKE VAL "23658",T-L:

   3 CLS : LET A$="*************
*******************": PRINT INK
L;''''A$;"* START PROGRAM WITH A
UTO-LOAD **     ©1986 GEORGE GIL
DER        *"'A$
   4 PRINT INK K''''"This progra
m is © protected. I  give permis
sion for this programto be used
as public domain     provided li
nes 3 & 4 are left   intact or a
re used in REM."'''"George Gilder
 5/86"
  20 PAUSE Y: CLS : CAT *
  30 DIM A$(32): LET F=D: PRINT
#K; INK L; FLASH K;"ARROWS MOVE
BAR-<ENTER> TO LOAD": GO TO T+Z
  35 PRINT PAPER M; OVER K;AT F,
J;A$
  40 LET Q$=INKEY$: IF Q$="" THE
N GO TO Z-T
  45 IF CODE Q$=Z+G-K THEN LET F
=F+K
  50 IF CODE Q$=Z+G THEN LET F=F
-K
  52 IF SCREEN$ (F,K)=" " THEN L
ET F=F-1
  54 IF SCREEN$ (F,K)="-" THEN L
ET F=F+1
  55 IF CODE Q$=D THEN GO TO T*T
  65 PRINT PAPER L; OVER K;AT F,
J;A$: PAUSE J
  80 GO TO VAL "35"
 100 PRINT AT V,J;A$;AT V,T; OVE
R K; INK K; FLASH K;"  LOADING
"
 125 LET X=F: DIM Q$(S): FOR F=K
 TO S: LET Q$(F)=SCREEN$ (X,F-K)
: NEXT F
 150 IF Q$(T TO )="DIR   " THEN L
ET Q$=Q$( TO T-K)+".DIR": GO TO
*Q$: GO TO 5
 160 IF Q$(T TO )<>"     " THEN
LET Q$=Q$( TO T-K)+"."+Q$(T TO )
: LOAD Q$
 170 LET Q$=Q$( TO T-K): LOAD *Q
$
9900 CLEAR : SAVE *"START1" LINE
 1
```

```
:DEMO
Level 0  Drive A
```

Name	Typ	Size	Alloc	S	P
MATHS	DIR	3187	4K		P
FUN	DIR	8919	13K		P
UTIL	DIR	4891	11K		P
FILING	DIR	1070	2K		P
HELP		11491	12K		P
GGDIAL	BAS	10265	11K		
GGSPK	BAS	14760	15K		P
SPKBLD	BAS	7768	8K		P
NOSGAM		3730	4K		P
START		999	1K		
MODEM	DIR	24383	32K		P
STARTLET		2619	3K		
CF3LAB	BAS	2331	3K		
PENTSPK		1442	2K		

ARROWS MOVE BAR-<ENTER> TO LOAD

PROGRAMING TIPS

A password routine, that can be entered into your programs to prevent unauthorised entry. Any attempt to BREAK into the program will result in a crash until the correct password is entered. REM statements inserted by NSL, and may be removed.

```
 4 REM Crash if BREAK detected
 5 POKE 23659,0
10 LET s$=""
20 PRINT AT 12,9;"ENTER PASSWORD"
30 PAUSE 0
40 LET a$= INKEY$: IF a$="" THEN
 GOTO 40
45 LET s$ = s$ + a$
48 REM The number 3 in next line should be
changed to the length of your password.
50 IF LEN s$ <> 3 THEN GOTO 30
55 REM Enter your password in next line.
60 IF s$ <> "NSL" THEN PRINT AT
1,5; "Sorry, wrong password": PA
USE 100: RANDOMIZE USR 0
70 PRINT AT 16,14;"O.K.": PAUSE 100
75 REM Reset BREAK
80 POKE 23659,1
90 CLS
100 REM Rest of your program.
```

SOFTWARE REVIEW By Keith Skapinski

Name: Off The Hook
System: 48k Spectrum or TS2068 With Spectrum Emulation
Format: Cassette
Manufacturer: Electric Dreams Software
Available In USA From: Curry Computer
P.O. Box 5607
Glendale, AZ 85312-5607
1-602-978-2902
Price From Curry: $14.95

Off The Hook is a compilation of ten programs- Pitfall II (Activision), Psytron (Beyond), Fall Guy (Elite), Ad Astra (Gargoyle Games), Sam Stoat (Gremlin Graphics), Splat (Incentive), Mugsy (Melbourne House), Kong Strikes Back (Ocean), Chequered Flag (Psion), Blue Max (US Gold).

Pitfall II (Activision)- This is very much like the Commodore 64 version. It is a graphic adventure in which you, Pitfall Harry, are searching in an underground cavern for your niece, your cat, and the Raj Diamond. On the way, you can pick up gold bars for extra points. I have never got anything except the gold bars. I did, however, see the cat a few times but I was unable to get to it. I found this game to be good but I think it is a little too hard because you always have to go back to the last square you touched when you are hit by something (frog, bird, etc.).

Psytron (Beyond)- This game is very, very involved and more than half of the instruction booklet which comes with the tape is used to explain this program. I didn't understand this program so I never really got a chance to play it. The idea is that you have to defend the Betula 5 Installation. I have no idea of how one would go about doing that, however. This program is very involved and takes a lot of time which I don't have right now.

Fall Guy (Elite)- In this game, you play the role of Colt Seavers and must satisfy the director with sufficient film footage by performing each stunt in the shortest time possible. You have only five takes on each scene and if you raise the capital to $64,000 you will be rewarded with a holiday. The stunts all involve jumping from one moving thing to another. It starts off with trains, then carriages, tanks, etc. but its really all the same. This program has good graphics but I feel the game could have been better if there were more stunts other than just jumping from one thing to another all the time.

Ad Astra (Gargoyle Games)- This is the space shoot 'em up program on this tape. The object is to dodge meteors and shoot down alien ships. The graphics are in 3D. It is fun because it's fast action that is not too hard and not too easy.

Sam Stoat Safebreaker (Gremlin Graphics)- As all is quiet and everyone sleeps, Sam sets out to exercise his stealth and cunning. The object is to locate the explosive bomb and match and blow the safe to collect the diamond. However, not enough instructions are given and it is harder than it sounds.

Splat (Incentive)- The object of this game is to move Zippy through a scrolling maze while collecting food for points. It sounds simple but there is a catch. As Zippy moves around collecting food, the maze scrolls in different directions and you have to move Zippy with it so he doesn't get splattered on the wall. The graphics aren't really too good but the game makes up for it.

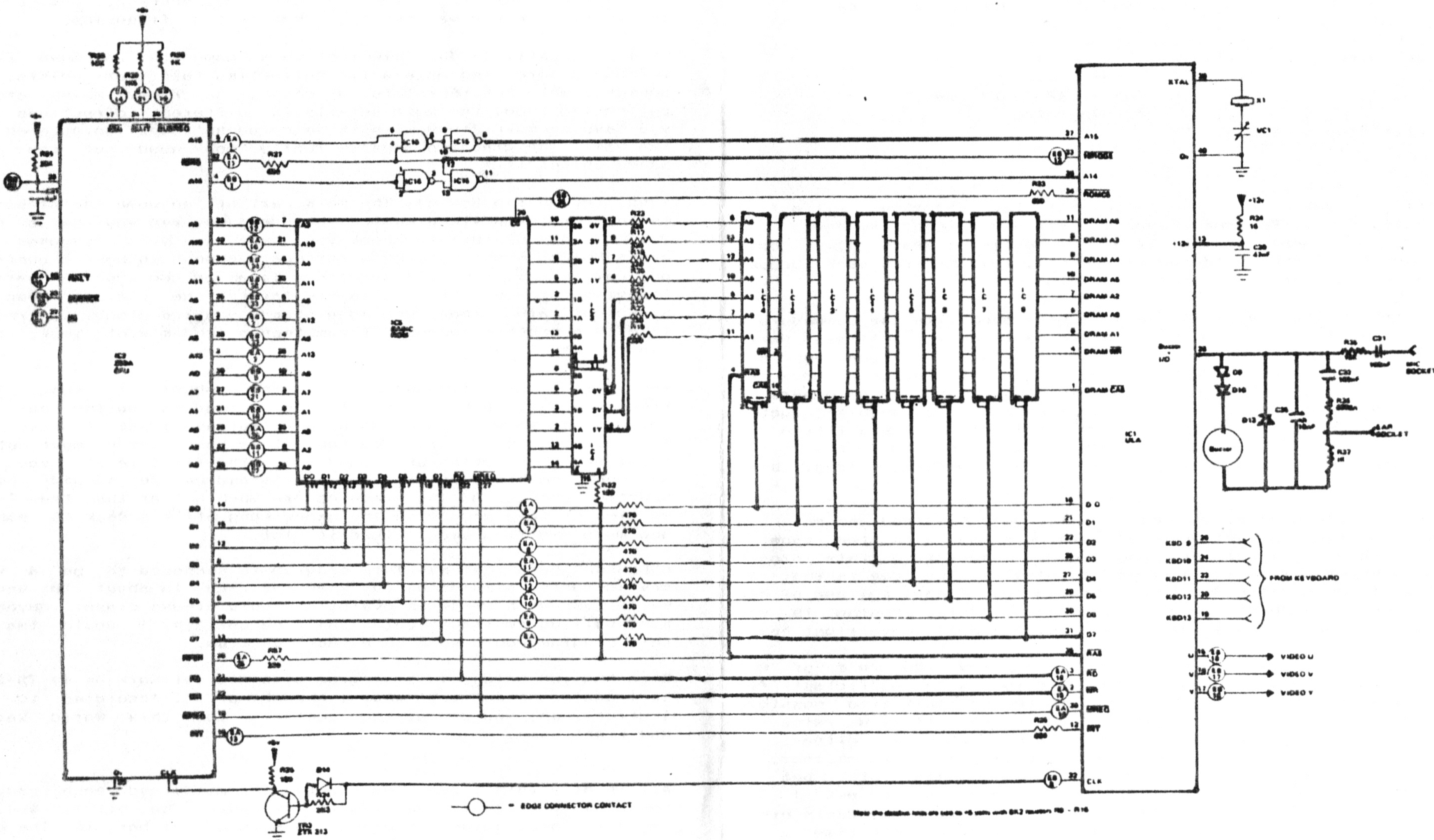
Mugsy (Melbourne House)- The main part of the game is presented in the form of a video comic. You are Mugsy and you run a Mob. When it is your turn to speak you type in your response and press ENTER. Should you be unfortunate enough to have a contract put out on you, you will be placed in an arcade type situation, fighting for your life. It is similar to the classic Lemonade Stand but rather than running a stand, you run a mob. I really like this program because it combines a good mix of luck, fun, and adventure.

Kong Strikes Back (Ocean)- This is the sequell to Kong. This time, however, rather than climbing up ladders looking out for barrels and fires, you climb up a fairground track looking out for roller coaster cars. You can either bomb them or move out of their way by climbing up a ladder. On the first level, you can get bonus points by collecting hearts and on the second level, Spectrum computers. The graphics are much better than the first version of Kong and so is the game. Kong Strikes Back is easier and more exciting and I liked it alot.

CHEQUERED FLAG (Psion)- This program is supposed to be a fast moving racing simulation but when the race is about to begin, my TS-2068 with Spectrum emulation would always crash. Maybe I need pull-up resistors but I can't be certain. I would imagine this program would work on a real Spectrum.

Blue Max (US Gold)- This program also did not work on my TS-2068 so I again can not tell what I thought of it. According to the instructions, you are at the controls for this World War 1 dog-fight game.

All in all, this tape is well worth the money and each program costs under $2.00 if you figure it out. The price, $14.95, includes shipping and handling. This is a real bargain. The only thing I didn't like was that for some programs, not enough instructions were given. When the instructions were shortened for this compilation, some important things were left out. I would still strongly recommend this tape, however.



SPECTRUM LOGIC CIRCUIT

Z80 OP Codes

DEC	HEX	OP CODE
0	00	NOP
1	01nn	LD BC,nn
2	02	LD (BC),A
3	03	INC BC
4	04	INC B
5	05	DEC B
6	06n	LD B,n
7	07	RLCA
8	08	EX AF,AF'
9	09	ADD HL,BC
10	0A	LD A,(BC)
11	0B	DEC BC
12	0C	INC C
13	0D	DEC C
14	0En	LD C,n
15	0F	RRCA
16	10d	DJNZ d
17	11nn	LD DE,nn
18	12	LD (DE),A
19	13	INC DE
20	14	INC D
21	15	DEC D
22	16n	LD D,n
23	17	RLA
24	18d	JR d
25	19	ADD HL,DE
26	1A	LD A,(DE)
27	1B	DEC DE
28	1C	INC E
29	1D	DEC E
30	1En	LD E,n
31	1F	RRA
32	20d	JR NZ,d
33	21nn	LD HL,nn
34	22nn	LD (nn),HL
35	23	INC HL
36	24	INC H
37	25	DEC H
38	26n	LD H,n
39	27	DAA
40	28d	JR Z,d
41	29	ADD HL,HL
42	2Ann	LD HL,(nn)
43	2B	DEC HL
44	2C	INC L
45	2D	DEC L
46	2En	LD L,n
47	2F	CPL
48	30d	JR NC,d
49	31nn	LD SP,nn
50	32nn	LD (nn),A
51	33	INC SP
52	34	INC (HL)
53	35	DEC (HL)
54	36n	LD (HL),n
55	37	SCF
56	38d	JR C,d
57	39	ADD HL,SP
58	3Ann	LD A,(nn)
59	3B	DEC SP
60	3C	INC A
61	3D	DEC A
62	3En	LD A,n
63	3F	CCF
64	40	LD B,B
65	41	LD B,C
66	42	LD B,D
67	43	LD B,E
68	44	LD B,H
69	45	LD B,L
70	46	LD B,(HL)
71	47	LD B,A
72	48	LD C,B
80	50	LD D,B
88	58	LD E,B
96	60	LD H,B
104	68	LD L,B
112	70	LD (HL),B
120	78	LD A,B
128	80	ADD A,B
136	88	ADC A,B
144	90	SUB B
152	98	SBC A,B
160	A0	AND B
168	A8	XOR B
176	B0	OR B
184	B8	CP B
192	C0	RET NZ
193	C1	POP BC
194	C2nn	JP NZ,nn
195	C3nn	JP nn
196	C4nn	CALL NZ,nn
197	C5	PUSH BC
198	C6n	ADD A,n
199	C7	RST 0H
200	C8	RET Z
201	C9	RET
202	CAnn	JP Z,nn
203	CB	see below
204	CCnn	CALL Z,nn
205	CDnn	CALL nn
206	CEn	ADC A,n
207	CF	RST 8H
208	D0	RET NC
209	D1	POP DE
210	D2nn	JP NC,nn
211	D3	OUT A
212	D4nn	CALL NC,nn
213	D5	PUSH DE
214	D6n	SUB n
215	D7	RST 10H
216	D8	RET C
217	D9	EXX
218	DAnn	JP C,nn
219	DB	IN A
220	DCnn	CALL C,nn
221	DD	see below
222	DEn	SBC A,n
223	DF	RST 18H
224	E0	RET PO
225	E1	POP HL
226	E2nn	JP PO,nn
227	E3	EX (SP),HL
228	E4nn	CALL PO,nn
229	E5	PUSH HL
230	E6n	AND n
231	E7	RST 20H
232	E8	RET PE
233	E9	JP (HL)
234	EAnn	JP PE,nn
235	EB	EX DE,HL
236	ECnn	CALL PE,nn
237	ED	see below
238	EEn	XOR n
239	EF	RST 28H
240	F0	RET P
241	F1	POP AF
242	F2nn	JP P,nn
243	F3	DI
244	F4nn	CALL P,nn
245	F5	PUSH AF
246	F6n	OR n
247	F7	RST 30H
248	F8	RET M
249	F9	LD SP,HL
250	FAnn	JP M,nn
251	FB	EI
252	FCnn	CALL M,nn
253	FD	see below
254	FEn	CP n
255	FF	RST 38H

Two byte instructions

Each of the following codes is preceded by CB (decimal 203)

DEC	HEX	OP CODE
0	00	RLC B
1	01	RLC C
2	02	RLC D
3	03	RLC E
4	04	RLC H
5	05	RLC L
6	06	RLC (HL)
7	07	RLC A
8	08	RRC B
16	10	RL B
24	18	RR B
32	20	SLA B
40	28	SRA B
56	38	SRL B
64	40	BIT 0,B
72	48	BIT 1,B
80	50	BIT 2,B
88	58	BIT 3,B
96	60	BIT 4,B
104	68	BIT 5,B
112	70	BIT 6,B
120	78	BIT 7,B
128	80	RES 0,B
136	88	RES 1,B
144	90	RES 2,B
152	98	RES 3,B
160	A0	RES 4,B
168	A8	RES 5,B
176	B0	RES 6,B
184	B8	RES 7,B
192	C0	SET 0,B
200	C8	SET 1,B
208	D0	SET 2,B
216	D8	SET 3,B
224	E0	SET 4,B
232	E8	SET 5,B
240	F0	SET 6,B
248	F8	SET 7,B

Op codes 40 to BF (decimal 64 to 191) and CB 00 to CB FF (decimal 203 0 to 203 255) fall naturally into groups of eight. Successive Op codes in each group use the next in the sequence B,C,D,E,H,L,(HL),A as the source or operand as appropriate. For example Op codes of the form n3 and nB where n=4,5,6,7,A or B all refer to E.

Op codes 40 to 47 and CB 00 to CB 07 are listed in their entirety but subsequently the first of each group only is shown.

Each of the following codes is preceded by ED (decimal 237).

DEC	HEX	OP CODE
66	42	SBC HL,BC
67	43nn	LD (nn),BC
68	44	NEG
69	45	RETN
71	47	LD I,A
74	4A	ADC HL,BC
75	4Bnn	LD BC,(nn)
77	4D	RETI
79	4F	LD R,A
82	52	SBC HL,DE
83	53nn	LD (nn),DE
87	57	LD A,I
90	5A	ADC HL,DE
91	5Bnn	LD DE,(nn)
95	5F	LD A,R
98	62	SBC HL,HL
103	67	RRD
106	6A	ADC HL,HL
111	6F	RLD
114	72	SBC HL,SP
115	73nn	LD (nn),SP
122	7A	ADC HL,SP
123	7Bnn	LD SP,(nn)
160	A0	LDI
161	A1	CPI
168	A8	LDD
169	A9	CPD
176	B0	LDIR
177	B1	CPIR
184	B8	LDDR
185	B9	CPDR

Each of the following codes is preceded by DD (decimal 221) when referring to the IX register or FD (decimal 253) when referring to the IY register. For clarity IX only is used below.

DEC	HEX	OP CODE
9	09	ADD IX,BC
25	19	ADD IX,DE
33	21nn	LD IX,nn
34	22nn	LD (nn),IX
35	23	INC IX
41	29	ADD IX,IX
42	2Ann	LD IX,(nn)
43	2B	DEC IX
52	34d	INC (IX+d)
53	35d	DEC (IX+d)
54	36dn	LD (IX+d),n
57	39	ADD IX,SP
70	46d	LD B,(IX+d)
78	4Ed	LD C,(IX+d)
86	56d	LD D,(IX+d)
94	5Ed	LD E,(IX+d)
102	66d	LD H,(IX+d)
110	6Ed	LD L,(IX+d)
112	70d	LD (IX+d),B
113	71d	LD (IX+d),C
114	72d	LD (IX+d),D
115	73d	LD (IX+d),E
116	74d	LD (IX+d),H
117	75d	LD (IX+d),L
119	77d	LD (IX+d),A
126	7Ed	LD A,(IX+d)
134	86d	ADD A,(IX+d)
142	8Ed	ADC A,(IX+d)
150	96d	SUB (IX+d)
158	9Ed	SBC A,(IX+d)
166	A6d	AND (IX+d)
174	AEd	XOR (IX+d)
182	B6d	OR (IX+d)
190	BEd	CP (IX+d)
225	E1	POP IX
227	E3	EX (SP),IX
229	E5	PUSH IX
233	E9	JP (IX)
249	F9	LD SP,IX

Three byte instructions

Each of the following codes is preceded by DD CB (decimal 221 203) when referring to the IX register or FD CB (decimal 253 203) when referring to the IY register. For clarity IX only is used below.

DEC	HEX	OP CODE
6	d06	RLC (IX+d)
14	d0E	RRC (IX+d)
22	d16	RL (IX+d)
30	d1E	RR (IX+d)
38	d26	SLA (IX+d)
46	d2E	SRA (IX+d)
62	d3E	SRLR (IX+d)
70	d46	BIT 0,(IX+d
78	d4E	BIT 1,(IX+d
86	d56	BIT 2,(IX+d
94	d5E	BIT 3,(IX+d
102	d66	BIT 4,(IX+d
110	d6E	BIT 5,(IX+d
118	d76	BIT 6,(IX+d
126	d7E	BIT 7,(IX+d
134	d86	RES 0,(IX+
142	d8E	RES 1,(IX+
150	d96	RES 2,(IX+
158	d9E	RES 3,(IX+
166	dA6	RES 4,(IX+
174	dAE	RES 5,(IX+
182	dB6	RES 6,(IX+
190	dBE	RES 7,(IX+
198	dC6	SET 0,(IX+
206	dCE	SET 1,(IX+
214	dD6	SET 2,(IX+
222	dDE	SET 3,(IX+
230	dE6	SET 4,(IX+
238	dEE	SET 5,(IX+
246	dF6	SET 6,(IX+
254	dFE	SET 7,(IX+

The Z80 has eight directly accessible 8 bit registers, A,B,C, D,E,F,H and L, and four sixteen bit registers IX, IY, the stack pointer SP and the programme counter PC. The eight 8 bit registers are sometimes used as four sixteen bit registers AF,BC,DE,HL. A is the accumulator, F holds flags and HL is used to point to an address in memory.

In the following n is a single byte number, nn is a two byte number, d is a displacement and (nn) is the contents of memory location nn e.g (HL) is the contents of the address held in HL.

1 Load
Mnemonic LD. Example LD A,C- copy the contents of C into A.
1.1 8 bit register to register e.g LD A, C
The contents of any of the registers A,B,C,D,E,H,L may be copied one to another.
1.2 8 bit memory to register e.g LD A, (HL)
(HL), (IX+d) or (IY+d), may be copied to any of the registers A,B,C,D,E, H,L. (BC), (DE) or (nn) may be copied to A.
1.3 8 bit register to memory e.g LD (HL), A
A,B,C,D,E,H,L may be copied to (HL), (IX+d), (IY+d). A may be copied to (BC), (DE) or (nn).
1.4 8 bit register or memory immediate e.g LD A, n
A value n may be loaded into A,B,C,D,E,H,L, (HL), (IX+d), (IY+d).
1.5 16 bit register to register e.g LD SP, HL
The contents of HL, IX or IY may be copied to SP.
1.6 16 bit memory to register e.g LD BC, (nn)
(nn) may be copied to BC, DE, HL, IX, IY, SP.
1.7 16 bit register to memory e.g LD (nn), BC
BC, DE, HL, IX, IY, SP may be copied to (nn)
1.8 16 bit register immediate e.g LD BC, nn
nn may be loaded into BC, DE, HL, IX, IY, SP

2 Push and Pop e.g PUSH HL POP HL
A PUSH instruction copies the contents of a named 16 register to the bottom of the stack and decrements the stack pointer twice. A POP instruction does the reverse. AF,BC,DE,HL,IX,IY may be PUSHed or POPped.

3 Exchange e.g EX AF AF'
An exchange instruction swops the contents of the named pair of 16 bit registers or memory locations. In the case of EX and EXX the contents are swopped with an otherwise inaccessible set of duplicate registers. Exchanges can be made between HL and DE, HL and (SP), (SP) and IX,(SP) and IY, AF and AF', BCDEHL and BCDEHL'.

4 8 bit add and subtract e.g ADD A,E SBC A,D
A,B,C,D,E,H,L,(HL),n,(IX+d), (IY+d) may be added or subtracted to or from the accumulator with or without the carry flag.

5 8 bit AND OR and XOR e.g AND C
A,B,C,D,E,H,L,(HL),n, (IX+d), (IY+d) may be combined with the accumulator using any of the three logical operators above.

6 Compare e.g CP C
Compare is like subtract except the flags only and not the contents of the accumulator are affected. A,B,C,D,E,H,L,(HL),n (IX+d), (IY+d) may be compared with the accumulator.

7 8 bit increment and decrement e.g INC B
A,B,C,D,E,H,L,(HL), (IX+d), (IY+d) may be incremented or decremented.

8 16 bit increment and decrement e.g INC BC
BC,DE,HL,IX,IY,SP may be incremented or decremented.

9 16 bit add and subtract e.g ADD HL, BC
BC,DE,HL,IX may be added with or without carry or subtracted with carry only to or from HL. BC,DE,SP,IX may be added without carry to IX. BC,DE,SP, IY may be added without carry to IY.

10 Jump, call and return
The flag register, F, contains a carry flag, C, which is set on carry, a parity flag P, which is set if a result is even, a sign flag, S, which is set if a result is negative, an overflow flag, V, which is set on overflow, and a zero flag, Z, which is set on zero. These flags can be used to control jumps, subroutine calls and returns.
10.1 Jump e.g JP NC, nn
The following jumps to an address nn are possible: absolute jump (JP); jump on zero or not zero (JP Z and JP NZ); jump on carry or not carry (JP C and JP NC); jump on positive or negative (JP P and JP M); jump on P/V = 1 or P/V = 0 (JP PE and JP PO). The following relative jumps to an address d relative to the current position are available where d is interpreted as lying in the range - 128 to 127: absolute relative jump (JR); relative jump on zero or not zero (JR Z or JR NZ); relative jump on carry or not carry (JR C and JR NC). Jumps may be made to the addresses held in HL,IX or IY. (JP (HL), JP(IX), JP(IY)). The DJNZ instruction decrements the B register and jumps to d if B is non zero.
10.2 Call e.g Call Z nn
If the call condition is met the current contents of the programme counter is PUSHed on to the stack and a jump is made to address nn. The following calls may be made: absolute call (CALL); call on zero or not zero (CALL Z or CALL NZ); call on carry or not carry (CALL C or CALL NC); call on positive or negative (CALL P or CALL M); call on P/V = 1 or P/V = 0 (CALL PE or CALL PO).
10.3 Return e.g RET PO
If the return condition is met the value in the stack is POPped into the programme counter causing a jump back to the position following the previous call. Return conditions are available to match each call condition.
Returns can also be made from the interrupt and the non-maskable interrupt (RETI and RETN)

11 Bit instructions
The eight bits in each register are numbered from 0 to 7 inclusive from right to left. Each of the following operations may be performed on the A,B,C,D, E,H,L registers and on (HL), (IX+d) and (IY+d).

11.1 Bit test e.g BIT 2, B
The bit test instruction sets the zero flag to the opposite of the named bit. Any bit may be tested.
11.2 Bit set e.g SET 5, D
Any bit may be set.
11.3 Bit reset e.g RES 7, H
Any bit may be reset.
11.4 Rotate left e.g RL B
Bit 7 is copied to the carry, the carry is copied to bit 0 and all other bits are copied one place to the left.
11.5 Rotate right e.g RR D
Bit 0 is copied to the carry, the carry is copied to bit 7 and all other bits are copied one place to the right.
11.6 Rotate left circular e.g RLC E
Bit 7 is copied to the carry and to bit 0. All other bits are copied one place to the left.
11.7 Rotate right circular e.g RRC A
Bit 0 is copied to the carry and to bit 7. All other bits are copied one place to the right.
11.8 Shift left arithmetic e.g SLA (HL)
All bits are copied one place to the left, bit 7 is copied to the carry and bit 0 is reset.
11.9 Shift right arithmetic e.g SRA A
All bits are copied one place to the right, bit 0 is copied to the carry and bit 7 is copied to itself.
11.10 Shift right logical e.g SRL (IX+d)
As shift right arithmetic but with bit 7 reset.
11.11 Rotate left digit and rotate right digit e.g RLD
In a rotate left bits 0 to 3 of A are copied to bits 0 to 3 of (HL); bits 0 to 3 of (HL) are copied to bits 4 to 7 of (HL); bits 4 to 7 of (HL) are copied to bits 0 to 3 of A.

12 Accumulator operations
12.1 Complement accumulator CPL
Every set bit is reset, every reset bit is set.
12.2 Negate accumulator NEG
Complement and add one.
12.3 Complement or set carry CCF or SCF
CCF complements the carry; SCF sets the carry.
12.4 Decimal adjust DAA
Corrects the results of BCD addition and subtraction.

13 Restart e.g RST 20
Save the programme counter on the stack and jump to location 8*nH where nH is the number in hexa decimal.

14 Block handling e.g LDI
LDI: Move one byte from (DE) to (HL) and decrement BC. LDIR: As LDI but repeat until BC = 0.
LDD: Move one byte from (DE) to (HL) and decrement BC, DE and HL.
LDDR: As LDD but repeat until BC=0.
CPI: Compare A and (HL), increment HL and decrement BC. CPIR: As CPI but repeat until BC = 0. CPD: As CPI but decrement HL. CPDR: As CPD but repeat until BC = 0.

15 Flip - flop e.g DI
DI: reset interrupt flip - flop.
EI: set interrupt flip - flop.

RAMPACK WITH BANK SWITCHING

OUT 244,48 turns it on
OUT 244, 0 turns it off

The number sent out enables a bank for each set bit.

e.g., 48 d is

7	6	5	4	3	2	1	0
0	0	1	1	0	0	0	0

So the two chunks(#4 & #5), ,which fit between 32768 and 49151,are enableu.

Similarly, Chunk 0 (the 0 to 8K Block) is enabled by Out 244,1 (The Chunk numbers are read Right to Left).

A+ Computer Response
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August 28, 1986

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FROM: A+ Computer Response

RE: QL Price Structure

The following price structure for the Sinclair QL will become effective August 15, 1986.

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20-29	169.
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VISA or MASTERCARD

NOTE:

1) No Software is supplied (only 4 blank carts)
2) Extra Cartridges are $10.95/4
3) Quanity prices starts at 25 kits - $109.
4) There is no assembly manual. This is not a Heathkit. You must have at least intermediate construction skills.

PLEASE NOTE, THAT MOST PEOPLE ARE INTERESTED IN THE $109.00 PACKAGE. (DETAILS ON P.1).

P.11

...IST
...O. BOX 438
...NTERPORT, N.Y. 11721-0438

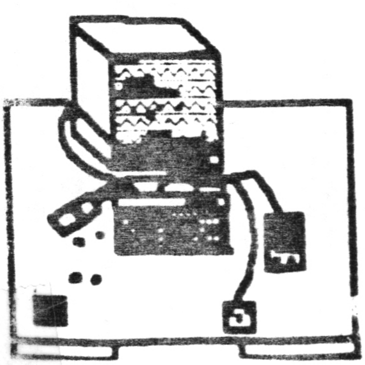
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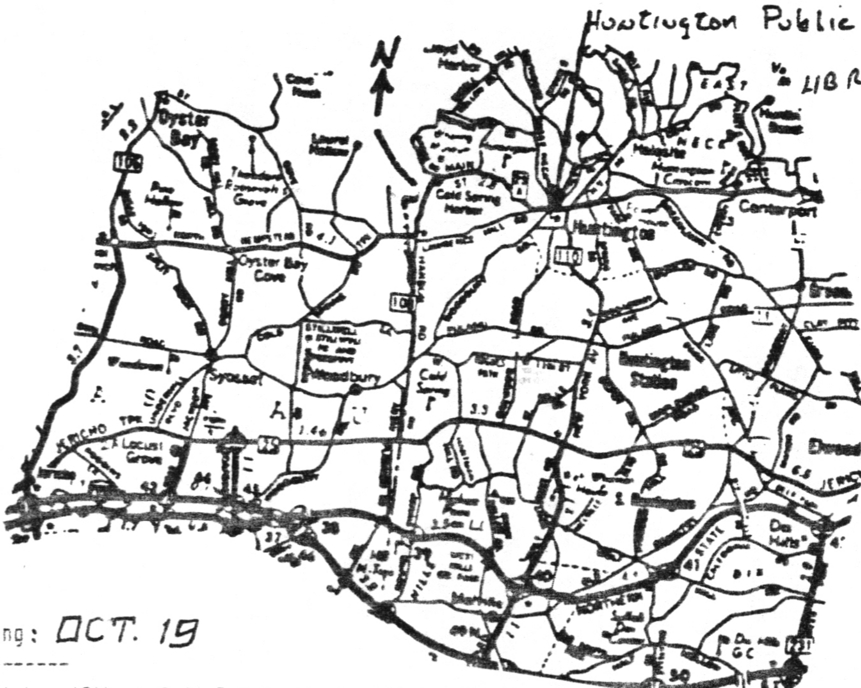
Grenville Clark USA 39

HICKSVILLE, NY OCT 18 PM 1986 11802

TO: Jan-87
Don Lambert
3310 Clover Dr S
Cedar Rapids IA
52404

Long Island Sinclair Timex Group
Huntington, NY Library
2 PM





Next Meeting: OCT. 19

Sunday, October 19th at 2:00 P.M in the Huntington Public Library.

From LIE: Exit 49 north on Rte 110, 7.1 miles to Main St (Rte 25A) in Huntington. Turn left, go 3 blocks to Prospect St.

From NSP: Exit 40 north on Rte 110, 6.0 miles to Main St (Rte 25A) in Huntington. Turn left, go 3 blocks to Prospect St.